

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Animal Abstract

Element Code: AMACC09010

Data Sensitivity: YES

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Idionycteris phyllotis*
COMMON NAME: Allen's Big-eared Bat; Mexican Big-eared Bat; Allen's Lappet-browed Bat
SYNONYMS: *Corynorhinus phyllotis*; *Idionycteris mexicanus*; *Plecotus phyllotis*
FAMILY: Vespertilionidae

AUTHOR, PLACE OF PUBLICATION: Allen, G.M. 1916. Bull. Mus. Comp. Zool., 60:352.

TYPE LOCALITY: San Luis Potosi, probably from near city of San Luis Potosi or near Rio Verde.

TYPE SPECIMEN:

TAXONOMIC UNIQUENESS: Monotypic species.

DESCRIPTION: Tawny above with hairs dark brown at base; underparts slightly lighter. No fur on wings or membranes. Ears large, 40 mm long, with two flaps (lappets) projecting forward from base of ears; tragus 16 mm. Ears often protected by folding and coiling them into "rams' horns" which lay along the sides of their necks. No glandular enlargements on muzzle; keeled calcar.

AIDS TO IDENTIFICATION: The presence of the forward-projecting lappets at the base of the ears distinguish *Idionycteris phyllotis* from the other 4 big-eared bats with which it may be confused: *Euderma maculatum*, *Antrozous pallidus*, *Macrotus californicus* and *Plecotus townsendii* (Hoffmeister, 1986). Call is a loud, distinctive "peep" at about 1 second intervals, similar to *E. maculatum* but lower in pitch. Also emit a "rapid clicking" or "low, barely audible cheeping" much like *P. townsendii*.

ILLUSTRATIONS: Black and white photo (Barbour and Davis 1969: 184)
Color photo (Barbour and Davis 1969: plate XIX)
Black and white photo (Hoffmeister 1986: 106)
Color photo (Whitaker 1980: plate 142)

TOTAL RANGE: Central highlands of Mexico from the Distrito Federal, San Luis Potosi, Tamaulipas and Durango northward into west-central New Mexico to the Colorado River Valley, Arizona, mostly at higher elevations (Barbour and Davis, 1969). Typically found in mountainous regions. Seasonal movements and cold season whereabouts unknown.

RANGE WITHIN ARIZONA: Specimen locations range across most of Arizona, but not known from the southwestern deserts of Arizona. Most Arizona specimens have been taken from the southern Colorado Plateau, the Mogollon Rim and adjacent mountain ranges.

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: Flights are characterized by "swift, direct flights from one place to another, interspersed with slower flights and by occasional near hoverings, as if the bat were carefully seeking an exit" (Barbour and Davis, 1969). Capable of highly maneuverable flights, can hover and even fly vertically. Their roosts are often loosely associated with roosts of *Plecotus townsendii*, *Myotis californicus*, *Myotis thysanodes*. They are fairly common in tree roosts on the Coconino and Apache-Sitgreaves National Forests, in Arizona (AGFD 1996). There is no

information on male or winter roosts, with the single exception of one individual observed in February, 1992, in a through and through adit in the Union Pass area near Kingman (Barry Spicer pers comm 1992).

REPRODUCTION: Reproduction in this species is very poorly known. Females form maternity colonies in the early summer. Males possibly solitary roosting during this time. Young born mid to late June in Arizona, begin to fledge by late July. Arizona maternity roosts known from the Kingman area and the Aravaipa Canyon area at the north end of the Galiuro Mountains. Lactating females have been captured in the vicinity of Flagstaff.

FOOD HABITS: Fragile skull and jaw suggest that *I. phyllotis* feeds primarily on soft-bodied insects. This is supported by diet studies which have found the main food to be small moths (Microlepidoptera, 6-12 mm in size). There are also records of *I. phyllotis* feeding upon soldier beetles (Cantharidae), dung beetles (Scarabeidae), leaf beetles (Chrysomelidae), roaches (Blattidae) and flying ants (Formicidae). Food is gleaned from surfaces or pursued and taken in flight.

HABITAT: In Arizona, taken most often in ponderosa pine, pinyon-juniper, Mexican woodland and riparian areas of sycamores, cottonwoods and willows. Has also been collected in white fir and in Mohave desertscrub. Boulder piles, cliffs, rocky outcrops or lava flows at or near most collection locations. Typically netted along streams or over ponds where the bats may be seeking insects, water or both. Roosts in caves and abandoned mineshafts.

ELEVATION: 1,320 ft (403 m) to 9,800 ft (3,225 m), but most specimens are at altitudes between 3,500 ft (1,100 m) and 7,500 ft (2,500 m).

PLANT COMMUNITY:

POPULATION TRENDS: Very poorly known. Barbour and Davis (1969) and Hoffmeister (1986) point to the paucity of pre-1955 records for Arizona and discuss the possibility that this species has only recently expanded its range into Arizona, Nevada, Utah and New Mexico.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[C2 USDI, FWS 1994]

STATE STATUS:

OTHER STATUS: Bureau of Land Management Sensitive (USDI, BLM AZ 2000)

MANAGEMENT FACTORS: Maternity colonies are easily disturbed, often resulting in abandonment.

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS: Survey for maternity and hibernaculum roost sites.

LAND MANAGEMENT/OWNERSHIP: BLM - Arizona Strip and Kingman Field Offices; NPS - Grand Canyon National Park; USFS - Apache-Sitgreaves, Coconino, Coronado, Kaibab and Tonto National Forests; BIA - Hualapai Reservation; State Land Department; AGFD Viet Ranch; TNC - Aravaipa Canyon Preserve; Private.

SOURCES OF FURTHER INFORMATION

LITERATURE CITATIONS:

- Allen, G.M. 1916. Bats of the genus *Corynorhinus*. Bull. Mus. Comp. Zool., 60:352.
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Barbour, R.W. and W.H. Davis. 1969. Bats of America. The University Press of Kentucky. pp. 183-186.
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- Czaplewski, N.J. 1983. *Idionycteris phyllotis*. Mammalian Species. No. 208:1-4. American Society of Mammalogists.
- Hayward, B.J. and R.R. Johnson. 1961. Notes on *Plecotus phyllotis* from Arizona. Journal of Mammalogy 42(3):402.
- Hoffmeister, D.F. 1986. Mammals of Arizona. University of Arizona Press. pp. 104-107.
- USDI, Bureau of Land Management. 2000. Arizona BLM Sensitive Species List. Instruction Memorandum No. AZ-2000-018.
- USDI, Fish and Wildlife Service. 1994. Endangered and Threatened Wildlife and Plants; Animal Candidate Review for Listing as Endangered or Threatened Species; Proposed Rule. Federal Register 59(219):58986
- USDI, Fish and Wildlife Service. 1996. Endangered and Threatened Wildlife and Plants: Review of Plant and Animal Taxa that are Candidates for Listing as Endangered or Threatened Species. Federal Register 61(40):7596-7613.
- Whitaker, J.O., Jr. 1980. The Audubon Society field guide to North American mammals. Alfred A. Knopf, New York. pp. 329; and Plate 142.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

- E.L. Cockrum - University of Arizona, Tucson.
- D.F. Hoffmeister - University of Illinois, Urbana.

ADDITIONAL INFORMATION:

I. phyllotis is readily taken in mist nets; they do not seem as adept at avoiding them as some of the other big-eared bats, such as *Plecotus townsendii*. *I. phyllotis* is most often netted 1½ - 2 hours after dusk. These bats are fairly docile and seldom attempt to bite when captured.

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